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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/341,401	08/23/1999	NAOFUMI YANAGIHARA	450101-4669	5072
20999	7590	05/18/2004		
FROMMER LAWRENCE & HAUG 745 FIFTH AVENUE- 10TH FL. NEW YORK, NY 10151				
			EXAMINER AN, SHAWN S	
			ART UNIT 2613	PAPER NUMBER 15

DATE MAILED: 05/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/341,401

Applicant(s)

YANAGIHARA ET AL.

Examiner

Shawn S An

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 30 April 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 14-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 14-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### **Request for Continued Examination**

1. The request filed on 4/30/04 for a Request for Continued Examination (RCE) under 37 CFR 1.114 based on parent Application No. 09/341,401 is acceptable and a RCE has been established. An action on the RCE follows.

### ***Response to Amendment***

2. As per Applicants' instructions in Paper 14 as filed on 4/30/04, claims 1, 3, 7, 14, 17-19 have been amended, and claims 9-13, 20-76 have been canceled.

### ***Response to Remarks***

3. Applicant's arguments with respect to amended claims 1, 3, 7, 14, 17-19 have been considered but are moot in view of the new ground(s) of rejection incorporating the previous prior art reference (Kim (5,737,019)).

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

5. Claims 1, 14-15, and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Kim (5,737,019).

**Regarding claims 1, 14-15, and 18**, Kim discloses a digital signal conversion device, comprising:

decoding means for decoding (Fig. 6, 100; Fig. 7, 605) a digital signal of a first format (resolution) consisting of orthogonal transform coefficients;

inverse quantization means (130) for inversely quantizing the decoded digital signal;

resolution conversion means (Fig. 6, DCT converter; Fig. 7, DCT Mapping) for orthogonally transforming at least two blocks of the inversely Q decoded signal and for extracting/interpolating a predetermined subset (Fig. 4, 310) from a complete set of the orthogonal transform coefficients (Fig. 4) from each of the at least two blocks of the digital signal of a first format (abs), thus producing partial (reduced/interpolated) orthogonal transform coefficients comprising less than the complete set of orthogonal transform coefficients from each of the at least two blocks (Col. 7, lines 63-67; Col. 8, lines 1-15), and forming a new coupled block (Fig. 3C) by connecting adjacent blocks represented by the extracted partial orthogonal transform coefficients of each of the at least two blocks, and

orthogonally transforming the coupled new block, thus generating a second digital signal of a second format (resolution) consisting of new orthogonal transform coefficients, the new orthogonal transform coefficients being composed of the predetermined subsets of the orthogonal transform coefficients of each of the at least two blocks (col. 18, lines 54-67).

quantization means (650) for quantizing the digital signal processed by resolution conversion means including the new coupled block; and

coding means (660) for coding the quantized digital signal for generating a digital signal of second format consisting of new orthogonal transform coefficients, the new orthogonal transform coefficients being composed of the predetermined subsets of the orthogonal transform coefficients of each of the at least two blocks (col. 18, lines 54-67).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2-8, 16-17, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (5,737,019).

**Regarding claims 2 and 16**, Kim discloses variable length coding (VLC) and VLD.

Furthermore, video signal compression scheme being coded at fixed rate or variable rate is well known in the art. Therefore, it would have been obvious for the first format video signal to have a fixed rate and the second format to have a variable rate.

**Regarding claim 3, 7, and 17**, Kim discloses reducing the number of DCT coefficients of vertical component of a color difference signal to  $\frac{1}{2}$ , and reducing DCT coefficients of horizontal and vertical components comprising Y (luminance) and U, V, (chrominance) difference signals (Col. 4, lines 2-14).

Furthermore, the Examiner takes official notice that reducing low frequency DCT coefficients are well known in the art for a purpose of reducing the resolution.

**Regarding claim 4**, The Examiner takes official notice that it is well known for DCT coefficients constituting line of odd and even fields (interlaced format), and subsequently dropping either odd or even fields as a generated output as a method for reducing resolution.

**Regarding claims 5-6 and 8**, Kim discloses having a compressed video signal having a resolution of 1920 X 1040, and converted resolution of 640 X 540 (col. 18,

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lines 54-67). Therefore, it would have been obvious to a person of skill in the art to simply change resolution sizes so that the compressed video signal has a resolution of 720 X 480, and converted resolution of 360 X 240. Furthermore, it is considered a design choice for a ratio of sampling frequency of color difference and luminance signal to be equal to 4:1:1 or 4:2:0 (application specific ratio).

**Regarding claim 19**, Kim discloses eliminating high frequency components when the image resolution is to be reduced (Col. 16, lines 27-35). Therefore, it would have been quite obvious for the conversion means to interpolate with 0 a high frequency side of the orthogonal transform coefficients of the at least two blocks of the digital signal of the first format for reducing high frequency coefficients, since the high frequency coefficients are considered less important, and the high frequency components are generally not visible by human eyes.

### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Shawn S An whose telephone number is 703-305-0099. The examiner can normally be reached on Flex hours (10).

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SSA

Primary Patent Examiner

5/14/04

SHAWN S. AN  
PATENT EXAMINER